

AMENDMENTS TO THE CLAIMS

Claims 1-25. (Canceled)

26. (Currently amended) A device for handling pressurized gas, said device comprising:

a housing having an inlet, an outlet, and a flow path from said inlet to said outlet;

first and second valves located within said housing;

an actuator arranged to initially open said first valve for flowing gas in a first direction at a first flow rate through a pressurization orifice, and to subsequently open said second valve for flowing gas in an axial direction at a second flow rate through said device, said second flow rate being greater than said first flow rate, said axial direction being the same as said first direction, said actuator comprising a piston unit slidably located within said actuator, said piston unit further comprising an upper seat of said first valve, said upper seat being in communication with an upper portion of said pressurization orifice; and

a lower cup-shaped valve element located within said housing, said lower cup-shaped valve element having a an annular recessed area for receiving a lower seat of said second valve, said lower seat being in communication with a lower portion of said pressurization orifice.

Claims 27-29. (Canceled)

30. (Previously presented) The device of claim 26 further comprising a spring for biasing said actuator in a first direction and said lower cup-shaped valve

element in a second direction, said first direction being opposite to said second direction.

31. (Original) The device of claim 30, wherein said actuator further comprises a cover and an actuator body, said cover being fixed with respect to said housing, and said piston unit being rotatably supported within said actuator body.

32. (Original) The device of claim 26, wherein said gas is oxygen.

33. (Original) The device of claim 26, wherein said gas is nitrous oxide.

34. (Currently amended) A surge prevention dual-path valve for pressurized oxygen comprising:

a housing having an inlet connected to a source of high pressure oxygen, an outlet, and a flow path from said inlet to said outlet;

a first valve located within said housing, said first valve comprising an upper seat in communication with an upper portion of a pressurization orifice;

a second valve located within said housing, said second valve comprising a lower seat in communication with a lower portion of said pressurization orifice;

a lower valve element located within said housing, said valve element having an annular recess for receiving said lower seat of said second valve; and

a threaded piston unit arranged to initially move said upper seat in a first direction to open said pressurization orifice, and to subsequently move said lower seat in an axial direction to open said flow path, said axial direction being the same as said first direction.

35. (Original) The dual-path valve of claim 34, wherein said piston unit is slidably located within an actuator unit of said housing.

36. (Original) The dual-path valve of claim 35, wherein said actuator unit is arranged to threadedly move in said axial direction said piston unit and said upper seat away from said upper portion of said pressurization orifice.

37. (Original) The dual-path valve of claim 36, wherein said actuator unit is further arranged to subsequently threadedly move in said axial direction said piston unit and said lower seat to open said second valve.

38. (Original) The dual-path valve of claim 37, further comprising a spring for biasing said actuator unit in a first direction and said lower seat in a second direction, said first direction being opposite to said second direction.

39. (Previously presented) A method of operating a surge prevention dual-path valve, said method comprising the steps of:

moving at least a portion of a piston unit in an axial direction for about 0.25 to about 1.5 seconds to cause gas to flow through a pressurization orifice of a first valve at a first flow rate; and

subsequently moving said piston unit in said axial direction to cause gas to flow through a second valve at a second flow rate, said second flow rate being greater than said first flow rate.

40. (Original) The method of claim 39, further comprising the step of rotating said piston unit to a first axial position.

41. (Original) The method of claim 40, wherein said piston unit is rotated through at least 270 degrees before said gas flows through said second valve.

42. (Original) The method of claim 41, wherein said gas flows through said first valve for at least 0.25 seconds before said gas flows through said second valve.

43. (Original) The method of claim 41, wherein said gas flows through said second valve before said piston unit is rotated through 450 degrees.

44. (Previously presented) The method of claim 43, wherein an operator removes his or her hand from a rotatable valve handle connected to said piston unit and re-grips said handle after said gas flows through said first valve and before said gas flows through said second valve.

45. (Original) The method of claim 40, further comprising the step of rotating said piston unit from said first axial position to a second axial position in the direction of the bias of a spring.

46. (Original) The method of claim 45, wherein said step of rotating said piston unit to a fully open position is enabled by locating said piston unit in said second axial position.

47. (Currently amended) A method of operating a surge prevention dual-path valve, said method comprising the steps of:

moving at least a portion of a threaded piston unit in an axial direction to cause oxygen to flow through a pressurization orifice of a first valve at a first flow rate;

subsequently moving said piston unit in said axial direction to cause a torque engagement that allows oxygen to flow through a second valve at a second flow rate,

said second flow rate being greater than said first flow rate, wherein said step of moving said piston unit to cause said torque engagement further comprises engaging a spring to bias said piston unit, said spring being provided at a lower end surface of said threaded piston unit; and

causing oxygen to flow through said dual-path valve at said second flow rate, through a pressure regulator and then to an operative device.

48. (Original) The method of claim 47, wherein said operative device is a face mask for a patient.

49. (Currently amended) A method of operating a surge prevention dual-path valve, said method comprising the steps of:

moving at least a portion of a threaded piston unit in an axial direction to cause nitrous oxide to flow through a pressurization orifice of a first valve at a first flow rate;

subsequently moving said piston unit in said axial direction to cause a torque engagement that allows nitrous oxide to flow through a second valve at a second flow rate, said second flow rate being greater than said first flow rate, wherein said step of moving said piston unit to cause said torque engagement further comprises engaging a spring to bias said piston unit, said spring being provided at a lower end surface of said threaded piston unit; and

causing nitrous oxide to flow through said dual-path valve at said second flow rate, through a pressure regulator and then to an operative device.

50. (Original) The method of claim 49, wherein said operative device is a face mask for a patient.